AF/3661 #

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☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 330.00

Complete if Known	
Application Number	10/063,498
Filing Date	April 30, 2002
First Named Inventor	Farid Ahmed-Zaid
Examiner Name	Hernandez, Olga
Art Unit	3661
Attorney Docket No.	199-1941 (FGT 1503 PA)

METHOD OF PAYMENT *(check all that apply)*

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☑ Deposit Account:

Deposit Account Number: 06-1510

Deposit Account Name: Ford Global Technologies, LLC

The Director is authorized to: *(check all that apply)*

☑ Charge fee(s) indicated below ☑ Credit any overpayments

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FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) ($) 0.00

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

	Extra Claims		Fee from below		Fee Paid
Total Claims		-20** =		X	=
Independent Claims		- 3** =		X	=
Multiple Dependent					=

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 0.00

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for *ex parte* reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	330.00
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($) 330.00

SUBMITTED BY

(Complete *(if applicable)*)

Name *(Print/Type)*	Jeffrey J. Chapp	Registration No. *(Attorney/Agent)*	50,579	Telephone	248-223-9500
Signature	Jeffrey J. Chapp			Date	December 16, 2003

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#7 Appeal Brief 1/00/4

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

1/3

In re Application of:

Farid Ahmed-Zaid, et al.

Serial No.: 10/063,498 Group Art Unit: 3661

Filed: April 30, 2002 Examiner: Hernandez, Olga

Title: OBJECT DETECTION IN ADAPTIVE CRUISE CONTROL

Atty. Docket No.: 199-1941 (FGT 1503 PA)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Appeal Briefs – Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

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BRIEF ON APPEAL

Mail Stop Appeal Briefs - Patents
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Alexandria, VA 22313-1450

Dear Sir:

The following Appeal Brief is being submitted pursuant to the Notice of Appeal filed November 3, 2003, in the above-identified application. The Appeal Brief is being submitted in triplicate to comply with the provisions of 37 CFR 1.192(c). Please charge the $330.00 fee for filing the Brief on Appeal to the Ford Motor Company Deposit Account No. 06-1510.

12/19/2003 AMONDAF1 00000048 061510 10063498
01 FC:1402 330.00 DA

I. Real Party in Interest

The real party in interest in this matter is Ford Global Technology, LLC, which is a wholly owned subsidiary of Ford Motor Company both in Dearborn, Michigan (hereinafter "Ford").

II. Related Appeals and Interferences

There are no other known appeals or interferences, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status Of The Claims

Claims 1-20 are currently pending and stand under final rejection. Claims 1-20 are the claims from which this appeal is taken. A copy of the claims on appeal is attached as an Appendix.

IV. Status Of Amendments

On August 13, 2003, an Amendment and Request for Reconsideration was filed, prior to the Final Office Action, which provided remarks for the allowance of claims 1-20. There have been no amendments filed subsequent to August 13, 2003.

V. Summary Of The Invention

By way of summary, the present invention is directed to methods and systems for adaptively controlling the speed of a vehicle. Claims 1, 11, 16, and 19 encompass several points of novelty, and since claims 2-10, 12-15, 17-18, and 20 depend from claims 1, 11, 16, and 19, respectively, they also contain at least the same points of novelty. Independent claims 11 and 19 are similar and therefore will be discussed together. Similarly, independent claims 1 and 16 are similar and therefore will be discussed together.

Claims 11 and 19 recite a method and system 20 for adaptively controlling the speed of a vehicle 22. Yaw rate of the vehicle 22 is sensed and in response thereto a

yaw rate signal is generated. The resume speed of the vehicle 22 is inhibited in response to the yaw rate signal.

The method and system 20 of claims 11 and 19 allow, for example, a vehicle controller 24 to inhibit resume speed of a host vehicle 22 when driving on a curved road. In so doing, the controller 24 prevents the host vehicle 22 from accelerating when a target vehicle is no longer detected due to the curvature of the road, thereby, preventing a collision between the host vehicle 22 and the target vehicle.

Applicants admit that the prior art has included a system for adjusting steering angle in response to vehicle speed. What is not known or suggested are the several novel limitations recited in claims 11 and 19 and associated aspects, which are utilized in combination. All of the novel limitations of claims 11 and 19 are not taught or suggested by the prior art separately or in combination. What is not known or suggested is the generation of a yaw rate signal indicative of the yaw rate of an automotive vehicle and the inhibition of resume speed of the vehicle in response to the yaw rate signal.

Claim 12 recites the method of claim 11 and further includes detecting an object and generating an object profile, detecting a future path of the automotive vehicle 22 and generating a predicted future path profile, assuming a future road condition to be the same as a present road condition, and inhibiting resume speed of the automotive vehicle 22 in response to the object profile, the assumption, and the predicted future path profile.

Claim 13 recites the method of claim 11 wherein detecting a future path of the automotive vehicle 22 is in response to a navigation signal.

Claim 14 recites the method of claim 11 and further includes adjusting the automotive vehicle speed in response to the object profile and the predicted future path profile to avoid a stopped object.

Claim 15 recites the method of claim 11 wherein the controller 24 in response to the object profile and the predicted future path profile signals a warning system 42.

Claim 20 recites the system of claim 19 and further includes a radar system detecting an object and generating an object profile, a navigation system 34

generating a navigation signal, and the controller 24 electrically coupled to the radar system 28 and the navigation system 34. The controller 24 in response to the object profile and the navigation signal generates a predicted future path profile and inhibits resume speed of the automotive vehicle 22 in response to the predicted future path profile.

Claims 1 and 16 recite a method and system 20 for adaptively controlling the speed of a vehicle 22. An object is detected and an object profile is generated. A navigation signal is generated by a navigation system 34. A future path of the vehicle 22 is determined in response to the navigation signal. An in-vehicle controller 24 generates a predicted future path profile in response to the future path and the object profile. Resume speed of the vehicle 22 is inhibited in response to the predicted future path profile via the controller 24.

The method and system of claims 1 and 16 also allow a controller 24 to inhibit resume speed of a vehicle 22 when driving on a curved road, as well as non-curved roads. The method and system of claims 1 and 16 inhibit resume speed in response to a predicted future path profile, instead of yaw rate of the vehicle 22. In so doing, the controller 24 prevents the host vehicle 22 from accelerating when a target vehicle is no longer detected or when a target vehicle is stopped and is in the future path of the host vehicle 22, thereby, also preventing a collision between the host vehicle 22 and the target vehicle.

Applicants admit that the prior art has included a monitoring system for remotely controlling multiple vehicles to follow planned or predetermined traveling paths. What is not known or suggested are the several novel limitations recited in claims 1 and 16 and associated aspects, which are utilized in combination. All of the novel limitations of claims 1 and 16 are not taught or suggested by the prior art separately or in combination. The limitations are stated in detail below.

What is not known or suggested is the detection of a future path of a vehicle 22 via a navigation system 34. What is also not known or suggested is the generation of a predicted future path profile of a host vehicle 22 in response to the future path of the host vehicle 22 and an object profile. Additionally, it is further not

known or suggested that a resume speed of the host vehicle 22 be inhibited in response to the predicted future path profile.

Claim 2 recites the method of claim 1 and further includes continuously updating the predicted future path profile.

Claim 3 recites the method of claim 2 wherein updating the predicted future path profile includes updating parameters selected from: an object profile, a yaw rate, a street category, and upcoming future road paths.

Claim 4 recites the method of claim 1 and further includes determining that the object is a stopped object, adjusting automotive vehicle speed in relation to the stopped object, and maintaining a safe operating distance between the automotive vehicle 22 and the stopped object.

Claim 5 recites the method of claim 1 and further includes assuming a future road condition to have a road curvature, a speed category, a number of lanes, or a road inclination that is the same as a present road condition.

Claim 6 recites the method of claim 1 wherein detecting the future path of the automotive vehicle 22 includes sensing yaw rate of the automotive vehicle 22 and generating a yaw rate signal, relating the yaw rate to a road curvature, and inhibiting resume speed of the automotive vehicle 22 in response to the yaw rate signal.

Claim 7 recites the method of claim 1 wherein detecting the future path of the automotive vehicle 22 includes using a navigation system 34 to generate a navigation signal using information selected from: an automotive vehicle position, a speed category, a future path of the automotive vehicle 22, a landmark location, a road curvature, an overhead object location, a bridge location, a construction zone, a number of lanes, a road type, and a road inclination.

Claim 8 recites the method of claim 1 wherein generating an object profile includes storing object parameters selected from: relative distance from the automotive vehicle 22, object location relative to a road, and velocity of the object relative to the automotive vehicle velocity.

Claim 9 recites the method of claim 1 wherein generating a predicted future path profile further includes determining object location with respect to the future path of the automotive vehicle 22.

Claim 10 recites the method of claim 1 wherein inhibiting the resume speed of the automotive vehicle 22 further includes inhibiting resume speed of the automotive vehicle 22 in response to a parameter selected from: a road curvature, a speed category, a number of lanes, and a constant road inclination.

Claim 17 recites the system of claim 16 wherein the controller 24 in generating a predicted future path profile determines an object location with respect to the future path of the automotive vehicle 22.

Claim 18 recites the system of claim 16 wherein the controller 24 determines the object to be a stopped object and adjusts the speed of the automotive vehicle 22 in relation to the stopped object.

VI. Issues

The following issues are presented in this appeal, which correspond directly to the Examiner's final grounds for rejection in the Final Office Action dated September 12, 2003:

(1) whether claims 1-20 are patentable under 35 U.S.C. 112, second paragraph,

(2) whether claims 11 and 19 are patentable under 35 U.S.C. 103(a) over Kanazawa et al. (USPN 4,552,239),

(3) whether claims 1-5, 7-10, 16-18, and 20 are patentable under 35 U.S.C. 103(a) over Kageyama et al. (USPN 6,246,932),

(4) whether claims 12-14 are patentable under 35 U.S.C. 103(a) over Kanazawa in view of Kageyama, and

(5) whether claim 6 is patentable under 35 U.S.C. 103(a) over Kageyama in view of Kanazawa.

VII. Grouping of Claims

The rejected claims have been grouped together by the Patent Office Examiner in the rejection. The Appellants state, however, that each of the rejected claims stand on their own recitation and are separately patentable for the reasons set forth in more detail below.

VIII. Argument

THE REJECTION OF CLAIMS 1-20 UNDER 35 U.S.C. § 112

Claims 1-20 stand finally rejected under 35 U.S.C. § 112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner in the First Office Action questioned how the limitation of inhibiting the resume speed of the vehicle, which is contained within the systems and methods of claims 1-20, is capable of being performed without the limitation of setting the speed of the vehicle. Note that the Applicants provided arguments in response to the section 112 rejection and to the Examiner's questioning in the filed Response to the Office Action, dated August 13, 2003. The Examiner has not responded to these arguments or provided any additional comments in this regard. The Applicants arguments are reiterated in detail below.

Applicants submitted that although a limitation is not recited or explicitly stated within a claim, it is not implied that the limitation cannot also performed in combination with the recited limitations. The limitation of inhibiting a resume speed may correspond with a single set speed, as the Examiner suggests, multiple set speeds, a variable set speed, a speed set by the vehicle operator or by a vehicle controller, or other set speeds known in the art. A set or desired speed may be determined after the speed of the vehicle has been inhibited, in which case a set speed would not exist before or be required to inhibit resume speed of the vehicle. For example, a controller of a vehicle may when inhibiting a resume speed may prevent the vehicle from accelerating whether or not a resume speed is set. A resume speed may be set after resume speed of the vehicle has been inhibited. A vehicle operator may set a resume speed or adjust a set speed after resume speed of the vehicle has been inhibited. Thus, it is not necessary to include the limitation of setting the speed, nor is the stated limitation necessary for the performance of inhibiting a resume speed.

THE REJECTION OF CLAIMS 11 AND 19 UNDER 35 U.S.C. § 103(a)

Claims 11 and 19 stand finally rejected under 35 U.S.C. § 103(a) over Kanazawa. Kanazawa discloses a four-wheel steering device for a vehicle. The steering device includes a steering wheel sensor 4 for determining steering angle θ_F of a pair of front wheels 1 and a vehicle speed sensor 12. A controller 10 in response to the steering angle θ_F and the speed of the vehicle adjusts the steering angle θ_R of the rear wheels 2.

The Office Actions state that Kanazawa teaches how to reduce the vehicle speed based on the yaw rate and they refer to col. 5, lines 20-24. In col. 5, lines 20-24 Kanazawa refers to a control characteristic plot, which describes a relationship between rear wheel steering angle θ_R and speed of the vehicle. The controller 10 of Kanazawa utilizes this relationship to determine and alter the steering angle θ_R of the rear wheels 2 in response to the detected vehicle speed from the speed sensor 12. Nowhere in col. 5, lines 20-24, or for that matter anywhere else in Kanazawa is the task of reducing vehicle speed mentioned or is the task of reducing the vehicle speed in response to yaw rate mentioned.

The Final Office Action states that the term "inhibiting" means to hold back, retrain and that is what the prior art does when it reduces the speed of the vehicle. Regardless of whether the provided definition of inhibiting is true or not, as stated above, Kanazawa does not reduce, decrease, inhibit, hold back, or retrain speed of any vehicle. Kanazawa simply adjusts steering angle in response to speed of a vehicle.

The Final Office Action further states that Kanazawa teaches the use of a controller for sensing yaw rate. In Kanazawa, yawing and yaw rate are only mentioned in an indirect fashion, that is to say, Kanazawa states that yawing is inherently altered when vehicle speed is altered. Nowhere in Kanazawa is there mention of a yaw rate sensor, determination of a yaw rate, or use of a yaw rate by a controller mentioned.

Applicants also submit that the reduction of a vehicle speed is not the same as the inhibition of a resume speed. When inhibiting resume speed, acceleration of the vehicle is inhibited. Also, when inhibiting acceleration of a vehicle, vehicle speed is not necessarily reduced.

The Office Actions correctly state that Kanazawa does not teach the use of a controller to sense the yaw rate. Kanazawa does not teach the use of a yaw rate

sensor, the generation of a yaw rate signal, and the use of a controller to inhibit the resume speed of a vehicle in response to the yaw rate signal. The Office Actions infer that it would have been obvious to use a controller for sensing yaw rate in order to make possible the comparison as the prior art does. It is not clear what comparison the Office Actions are referring to in the stated rejection. No yaw rate comparison is made or utilized in or by the device of Kanazawa or discussed anywhere in Kanazawa. Therefore, applicants respectfully submit that the combinations in claims 11 and 19 are not found in the prior art.

Additionally, referring to MPEP 2141.01(a), while the Patent Office classification of references and cross-references in the official search notes are some evidence of "nonanalogy" or "analogy" respectively, the court has found "the similarities and differences in structure and function of the inventions to carry far greater weight." *In re Ellis*, 476 F.2d 1370, 1372, 177USPQ526, 527 (CCPA 1973). Kanazawa would not have logically commended itself to an inventor's attention in considering the problems solved by the method and system of claims 11 and 19. In developing an adaptive control method for controlling the speed of an automotive vehicle, one would clearly not look to a four-wheel steering device that cannot even be used to adjust the speed of a vehicle. Kanazawa would not be reasonably pertinent to the particular problems solved by the method and system of claims 11 and 19. Thus, the Applicants submit that Kanazawa is nonanalogous art.

THE REJECTION OF CLAIMS 1 AND 16 UNDER 35 U.S.C. § 103(a)

Claims 1-5, 7-10, 16-18, and 20 stand finally rejected under 35 U.S.C. 103(a) over Kageyama. Kageyama discloses a vehicle monitoring system for controlling movements of multiple vehicles 11-13 around a work site 30. The vehicles 11-13 are controlled from a remotely located monitoring station 20 via communication signals A-I, which are transmitted and received between the monitoring station 20 and the vehicles 11-13. Kageyama does not teach or suggest each and every limitation recited in independent claims 1 and 16, specifically: (1) detection of a future path of a vehicle via a navigation system; (2) the generation of a predicted future path profile of a host vehicle

in response to the future path of the host vehicle and an object profile; and (3) the inhibition of a resume speed of the host vehicle in response to the predicted future path profile.

The Office Actions state that Kageyama teaches detecting a future path of a vehicle and refers to col. 11, lines 11-17. Kageyama does not teach or suggest detecting a future path of a vehicle, let alone performing the detection via a navigation system. The Final Office Action states that Kageyama teaches using a planned traveling path and that the planned traveling path is well understood. Applicants agree. However a planned traveling path is clearly different than a detected or predicted future path. The planned traveling path of Kageyama is predetermined by the monitoring station, whereas the future path of claims 1 and 16 are determined and predicted using a navigation system. This is reinforced by the limitation of generating a predicted future path profile. The monitoring station 20 of Kageyama does not detect a future path of the vehicle in response to a navigation signal, such as one generated by a global positioning system, but rather has a planned path that is predetermined. The monitoring station 20 simply directs a vehicle of concern to follow a predetermined path in response to the relative location of other monitored vehicles. The monitoring station 20 at any given moment in time does not determine or predict a future path of a vehicle, the path is already known.

The Final Office Action states that Kageyama teaches the generation of a navigation signal from a navigation system and refers to the reception of position data in col. 3, lines 45-46. Although position data is transmitted and received in Kageyama, Kageyama does not determine a future path in response to a navigation signal, as stated above. Current position data is not the same as determining or predicting future position data.

The First Office Action states that Kageyama teaches generating a predicted future path profile in response to the future path and the object profile and refers to col. 11, lines 26-30, which also disclose a planned traveling path. Kageyama does not generate a predicted future path profile, but rather follows a predetermined traveling path. The controllers of claims 1 and 16, of the present invention, generate a predicted future path profile in response to a currently detected future path of the

vehicle 22 not in response to a predetermined traveling path. Note that the First Office Action refers to a predetermined traveling path for both the future path and the predicted future path profile, which as defined by the present invention are not the same.

The First Office Action further states that Kageyama teaches inhibiting the speed of a vehicle in response to a predicted future path profile. Since Kageyama does not teach or suggest detection of a future path or the generation of a predicted future path profile of a vehicle, Kageyama also does not teach or suggest the inhibition of the resume speed of a vehicle in response thereto.

In addition, the First Office Action correctly states that Kageyama does not specify resume speed. Kageyama does not mention, set, determine, or inhibit a resume speed of a vehicle nor does Kageyama teach or suggest the use of an in-vehicle controller to inhibit the resume speed of a vehicle. The Final Office Action states that Kageyama has at least one in-vehicle controller that performs this function when it receives the information from the vehicle running ahead, and refers to col. 9, lines 47-51. In col. 9, lines 47-51, Kageyama discloses stopping and reducing speed of a vehicle in response to directive data received from the monitoring station 20. The vehicle controller 35 of Kageyama, shown in Figure 3, receives signals from the monitoring station 20 and in response thereto stops or reduces speed of the vehicle. Although the controller 35 may be used in controlling speed of a vehicle, nowhere in col. 9, lines 47-51 or anywhere else in Kageyama is a resume speed, inhibition of a resume speed, or inhibition of a resume speed by an in-vehicle controller mentioned or suggested, and clearly not in response to a predicted future path profile, as described above.

Therefore, applicants respectfully submit that the combinations in claims 1 and 16 are also not found in the prior art.

Claim 5 is believed to be allowable for the reasons set forth above since it depends from claim 1 and further recites assuming a future road condition to have a road curvature, a speed category, a number of lanes, or a road inclination that is the same as a present road condition. Neither of the references teach nor suggest this combination.

Claim 7 is believed to be allowable for the reasons set forth above since it depends from claim 1 and further recites using a navigation system 34 to generate a navigation signal using information selected from: an automotive vehicle position, a speed category, a future path of the automotive vehicle 22, a landmark location, a road curvature, an overhead object location, a bridge location, a construction zone, a number of lanes, a road type, and a road inclination. Neither of the references teach nor suggest this combination.

Claim 8 is believed to be allowable for the reasons set forth above since it depends from claim 1 and further recites storing object parameters selected from: relative distance from the automotive vehicle 22, object location relative to a road, and velocity of the object relative to the automotive vehicle velocity. Neither of the references teach nor suggest this combination.

Claim 9 is believed to be allowable for the reasons set forth above since it depends from claim 1 and further recites determining object location with respect to the future path of the automotive vehicle 22. Neither of the references teach nor suggest this combination.

Claim 10 is believed to be allowable for the reasons set forth above since it depends from claim 1 and further recites inhibiting resume speed of the automotive vehicle 22 in response to a parameter selected from: a road curvature, a speed category, a number of lanes, and a constant road inclination. Neither of the references teach nor suggest this combination.

Claim 17 is believed to be allowable for the reasons set forth above since it depends from claim 16 and further recites determining an object location with respect to the future path of the automotive vehicle 22. Neither of the references teach nor suggest this combination.

Claim 18 is believed to be allowable for the reasons set forth above since it depends from claim 16 and further recites the controller determining the object to be a stopped object and adjusts the speed of the automotive vehicle 22 in relation to the stopped object. Neither of the references teach nor suggest this combination.

Claim 20 is believed to be allowable for the reasons set forth above with respect to Kanazawa since it depends from claim 19 and further recites a radar system

28 detecting an object and generating an object profile, a navigation system 34 generating a navigation signal, and the controller 24 electrically coupled to the radar system 28 and the navigation system 34. The controller 24 in response to the object profile and the navigation signal generates a predicted future path profile and inhibits resume speed of the automotive vehicle 22 in response to the predicted future path profile. Note that dependent claim 20 stands rejected under 35 U.S.C. 103(a) in view of Kageyama and that the associated independent claim 19 does not. Also, note that the limitations of claim 19 are not taught or suggested in Kageyama. Specifically, Kageyama does not teach or suggest the generation of a yaw rate signal indicative of the yaw rate of an automotive vehicle and the inhibition of a resume speed of the vehicle in response to the yaw rate signal. Neither of the stated references teach nor suggest this combination.

THE REJECTION OF CLAIMS 12-14 UNDER 35 U.S.C. § 103(a)

Claims 12-14 stand finally rejected under 35 U.S.C. 103(a) over Kanazawa in view of Kageyama. Applicants submit that since the combinations of claim 11 are not found in the prior art, that the combinations of claims 12-14 are also not found in the prior art for at least the same reasons.

THE REJECTION OF CLAIMS 6 UNDER 35 U.S.C. § 103(a)

Claim 6 stands finally rejected under 35 U.S.C. 103(a) over Kageyama in view of Kanazawa. Applicants submit that since the combinations of claim 1 are not found in the prior art, that the combinations of claim 6 are also not found in the prior art for at least the same reasons.

IX. Appendix

A copy of the claims involved in this appeal, namely claims 1-20, are attached hereto as Appendix A.

X. Conclusion

For the reasons advanced above, Appellants respectfully contend that each claim is patentable. Therefore reversal of the rejection is requested.

Respectfully submitted,

Jeffrey J. Chapp, Reg. No. 50,579
Attorney for Assignee
Artz & Artz, P.C.
28333 Telegraph Road, Suite 250
Southfield, MI 48034
(248) 223-9500

Dated: December 16, 2003

APPENDIX A

What is claimed is:

1. A method of adaptively controlling the speed of an automotive vehicle having a controller comprising:

detecting an object and generating an object profile;

generating a navigation signal via a navigation system;

detecting a future path of the automotive vehicle in response to said navigation signal;

generating a predicted future path profile in response to said future path and said object profile; and

inhibiting a resume speed of the automotive vehicle in response to said predicted future path profile via the controller.

2. A method as in claim 1 further comprising continuously updating said predicted future path profile.

3. A method as in claim 2 wherein updating said predicted future path profile includes updating parameters selected from the following group comprising: object profile, yaw rate, street category, and upcoming future road paths.

4. A method as in claim 1 further comprising:

determining that said object is a stopped object;

adjusting automotive vehicle speed in relation to said stopped object; and

maintaining a safe operating distance between the automotive vehicle and said stopped object

5. A method as in claim 1 further comprising assuming a future road condition selected from the following group comprising: road curvature, speed category, number of lanes, and road inclination is the same as a present road condition.

6. A method as in claim 1 wherein detecting the future path of the automotive vehicle comprises:

sensing yaw rate of the automotive vehicle and generating a yaw rate signal;

relating said yaw rate to road curvature; and

inhibiting resume speed of the automotive vehicle in response to said yaw rate signal.

7. A method as in claim 1 wherein detecting the future path of the automotive vehicle comprises using a navigation system to generate a navigation signal including information selected from the following group comprising: automotive vehicle position, speed category, future path of the automotive vehicle, landmark location, road curvature, overhead object location, bridge location, construction zone, number of lanes, road type, and road inclination.

8. A method as in claim 1 wherein generating an object profile comprises storing object parameters selected from the following list comprising: relative distance from the automotive vehicle, object location relative to a road, and velocity of said object relative to the automotive vehicle velocity.

9. A method as in claim 1 wherein generating a predicted future path profile further comprises determining object location with respect to the future path of the automotive vehicle.

10. A method as in claim 1 wherein inhibiting the resume speed of the automotive vehicle further comprises inhibiting resume speed of the automotive vehicle while a present parameter selected from the following group comprising: road curvature, speed category, number of lanes, and road inclination remains constant.

11. A method of adaptively controlling the speed of an automotive vehicle having a controller comprising:

sensing yaw rate of the automotive vehicle;

generating a yaw rate signal; and

inhibiting resume speed of the automotive vehicle in response to said yaw rate signal.

12. A method as in claim 11 further comprising:

detecting an object and generating an object profile;

detecting a future path of the automotive vehicle and generating a predicted future path profile;

assuming a future road condition to be the same as a present road condition; and

inhibiting resume of the automotive vehicle in response to said object profile, said assumption, and said predicted future path profile.

13. A method as in claim 11 wherein detecting a future path of the automotive vehicle is in response to a navigation signal.

14. A method as in claim 11 further comprising adjusting the automotive vehicle speed in response to said object profile and said predicted future path profile to avoid a stopped object.

15. A method as in claim 11 wherein said controller in response to said object profile and said predicted future path profile signals a warning system.

16. A control system for an automotive vehicle comprising:

a detection system detecting an object, said detection system generating a object profile;

a navigation system generating a navigation signal; and

an in-vehicle controller electrically coupled to said detection system and said navigation system, said controller in response to said object profile and said navigation signal, generating a predicted future path profile and inhibiting resume speed of the automotive vehicle in response to said predicted future path profile.

17. A system as in claim 16 wherein said controller in generating a predicted future path profile determines an object location with respect to the future path of the automotive vehicle.

18. A system as in claim 16 wherein said controller determines said object to be a stopped object and adjusts the speed of the automotive vehicle in relation to said stopped object.

19. A control system for an automotive vehicle comprising:

a yaw rate sensor sensing yaw rate of the automotive vehicle, said yaw rate sensor generating a yaw rate signal; and

a controller electrically coupled to said yaw rate sensor, said controller inhibiting resume speed of the automotive vehicle in response to said yaw rate signal.

20. A system as in claim 19 further comprising:

a radar system detecting an object, said radar system generating an object profile; and

a navigation system generating a navigation signal;

said controller electrically coupled to said radar system and said navigation system, said controller in response to said object profile and said navigation signal generating a predicted future path profile and inhibiting resume speed of the automotive vehicle in response to said predicted future path profile.